

## WHAT IS CLAIMED IS:

1. A log acquisition method for acquiring a log during execution of a program which comprises functions that execute predetermined processes, comprising:

5 a step of identifying a designated function of functions in an operating system, which are called upon execution of the program; and

a step of rewriting addresses of the loaded functions that execute the predetermined processes, and  
10 an address of the designated function in the operating system to an address of a function for log acquisition, and

the function for log acquisition, comprising:

a step of calling the functions that execute the  
15 predetermined processes and the designated function in the operating system, making the functions execute the predetermined processes, and passing a received execution result to the program;

a step of recording predetermined information  
20 upon calling the functions that execute the predetermined processes and the designated function in the operating system; and

a step of recording predetermined information upon receiving the execution result.

25 2. The method according to claim 1, wherein the predetermined information upon calling the functions that execute the predetermined processes and the

designated function in the operating system comprises at least one of function names of the called functions, a time upon calling, a parameter upon calling, and memory contents designated by a pointer parameter upon  
5 calling.

3. The method according to claim 1, wherein the predetermined information upon receiving the execution result comprises at least one of a time upon reception, a parameter upon reception, a return value upon  
10 reception, and memory contents designated by a pointer parameter upon reception.

4. The method according to claim 1, wherein the addresses of the functions that execute the predetermined processes are described in an import  
15 function address table for respective dynamic link libraries that provide the functions.

5. The method according to claim 1, further comprising, a step of selecting an address to be rewritten to the address of the function for log  
20 acquisition from the addresses of the functions that execute the predetermined processes, and

in that the rewriting step includes a step of rewriting the address of the function selected in the selection step.

25 6. The method according to claim 1, further comprising: a step of defining one or a plurality of predetermined modules; and a step of determining

whether or not a given function is called via the defined module, and in that when the function is called via the defined module, the predetermined information upon calling that function is excluded from a recording  
5 target.

7. The method according to claim 1, further comprising: a step of defining one or a plurality of predetermined modules included in the operating system; and a step of determining whether or not a given  
10 function is called via the defined module, and in that when the function is called via a module included in the operating system other than the defined modules, the predetermined information upon calling that function is excluded from a recording target.

15 8. The method according to claim 1, wherein when the predetermined information is a structure, information allocated at a position skipped by a size of the structure from a head of a memory area where the structure is stored, is recorded in correspondence with  
20 a size designated in the structure.

9. The method according to claim 1, wherein when the predetermined information is a structure, information allocated at a position skipped by an offset designated in the structure from a head of a memory area where the  
25 structure is stored, is recorded as data of a defined data type.

10. The method according to claim 1, wherein which of a plurality of pieces of predetermined information of functions of modules represents information of an object and which of them represents a class ID of the object are defined, and information of the object  
5 contained in the predetermined information of a function is recorded on the basis of the class ID of the object upon calling that function.

11. The method according to claim 1, wherein which of a plurality of pieces of predetermined information of functions of modules represents information of an object and which of them represents an interface ID of the object are defined, and information of the object  
10 stored in the predetermined information of a function is recorded on the basis of the interface ID of the object upon calling that function.

12. The method according to claim 1, wherein an additional definition of a module name corresponding to a library or each interface is prepared, and the module  
20 name is recorded with reference to the additional definition upon calling a function.

13. A log acquisition method for acquiring a log during execution of a program which comprises a function that executes a predetermined process,  
25 comprising:

a step of identifying a designated area having a predetermined offset from an address when the function that executes the predetermined process is loaded; and

a step of rewriting an address of the loaded  
5 function that executes the predetermined process to an address of a function for log acquisition, and

the function for log acquisition, comprising:

a step of calling the function that executes the predetermined process, making the function execute the  
10 predetermined process, and passing a received execution result to the program;

a step of recording predetermined information upon calling the function that executes the predetermined process;

15 a step of recording predetermined information upon receiving the execution result; and

a step of reading out data in the designated area and recording the data.

14. A log acquisition method for acquiring a log  
20 during execution of a program which comprises a first function that executes a predetermined process, comprising:

a step of identifying a designated second function of second functions which are called by only  
25 the first function that is directly called by an execution file of the program upon execution of the program; and

a step of rewriting an address of the designated second function loaded when that second function is called by the first function to an address of a function for log acquisition, and

5           the function for log acquisition, comprising:

a step of calling the designated second function, making the function execute the predetermined process, and receiving an execution result;

a step of recording predetermined information upon calling the designated second function; and

a step of recording predetermined information upon receiving the execution result.

15.   A log acquisition method for acquiring a log during execution of a program which comprises a first  
15   function that executes a predetermined process, comprising:

a step of identifying an ID set in a second function which is called by only the first function that is directly called by an execution file of the  
20   program upon execution of the program; and

a step of rewriting an address of the second function which is set with the ID and is loaded when that second function is called by the first function to an address of a function for log acquisition, and

25           the function for log acquisition, comprising:

a step of calling the second function set with the ID, making the function execute the predetermined process, and receiving an execution result;

a step of recording predetermined information  
5 upon calling the second function set with the ID; and

a step of recording predetermined information upon receiving the execution result together with the set ID.

16. A log acquisition method for acquiring a log  
10 during execution of a program which comprises methods that execute predetermined processes, comprising:

a step of identifying a designated method of methods in an operating system, which are called upon execution of the program; and

15 a step of rewriting addresses of the loaded methods that execute the predetermined processes, and an address of the designated method in the operating system to an address of a method for log acquisition, and

20 the method for log acquisition, comprising:

a step of calling the methods that execute the predetermined processes and the designated method in the operating system, making the methods execute the predetermined processes, and passing a received

25 execution result to the program;

a step of recording predetermined information upon calling the methods that execute the predetermined

processes and the designated method in the operating system; and

a step of recording predetermined information upon receiving the execution result.

5 17. The method according to claim 16, wherein the predetermined information upon calling the methods that execute the predetermined processes and the designated method in the operating system comprises at least one of method names of the called methods, a time upon  
10 calling, a parameter upon calling, and memory contents designated by a pointer parameter upon calling.

18. The method according to claim 16, wherein the predetermined information upon receiving the execution result comprises at least one of a time upon reception,  
15 a parameter upon reception, a return value upon reception, and memory contents designated by a pointer parameter upon reception.

19. The method according to claim 16, wherein the addresses of the methods that execute the predetermined  
20 processes are described in a virtual address table for respective interfaces that provide the methods.

20. The method according to claim 16, further comprising, a step of selecting an address to be rewritten to the address of the method for log  
25 acquisition from the addresses of the methods that execute the predetermined processes, and



in that the rewriting step includes a step of rewriting the address of the method selected in the selection step.

21. A log acquisition method for acquiring a log  
5 during execution of a program which comprises a method that executes a predetermined process, comprising:

a step of identifying a designated area having a predetermined offset from an address when the method that executes the predetermined process is loaded; and

10 a step of rewriting an address of the loaded method that executes the predetermined process to an address of a method for log acquisition, and

the method for log acquisition, comprising:

a step of calling the method that executes the  
15 predetermined process, making the method execute the predetermined process, and passing a received execution result to the program;

a step of recording predetermined information upon calling the method that executes the predetermined  
20 process;

a step of recording predetermined information upon receiving the execution result; and

a step of reading out data in the designated area and recording the data.

25 22. A log acquisition method for acquiring a log during execution of a program which comprises a first

method that executes a predetermined process,  
comprising:

a step of identifying a designated second method  
of second methods which are called by only the first  
5 method that is directly called by an execution file of  
the program upon execution of the program; and

a step of rewriting an address of the designated  
second method loaded when that second method is called  
by the first method to an address of a method for log  
10 acquisition, and

the method for log acquisition, comprising:

a step of calling the designated second method,  
making the method execute the predetermined process,  
and receiving an execution result;

15 a step of recording predetermined information  
upon calling the designated second method; and

a step of recording predetermined information  
upon receiving the execution result.

23. A log acquisition method for acquiring a log  
20 during execution of a program which comprises a first  
method that executes a predetermined process,  
comprising:

a step of identifying an ID set in a second  
method which is called by only the first method that is  
25 directly called by an execution file of the program  
upon execution of the program; and

a step of rewriting an address of the second method which is set with the ID and is loaded when that second method is called by the first method to an address of a method for log acquisition, and

5       the method for log acquisition, comprising:

a step of calling the second method set with the ID, making the method execute the predetermined process, and receiving an execution result;

a step of recording predetermined information  
10 upon calling the second method set with the ID; and

a step of recording predetermined information upon receiving the execution result together with the set ID.

24. A control program for making a computer implement  
15 a log acquisition method of claim 1.

25. A storage medium storing a control program of claim 24.